DOCUMENT RESUME

ED 238 768 SO 015 201

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TITLE	The Mountain West and the World: International Connections and Alternative Futures. A Handbook of 15 Activities for Secondary Classrooms.
INSTITUTION	Weber State Coll., Ogden, UT. Div. of Continuing Education and Community Services.
SPONS AGENCY	Department of Education, Washington, DC.
PUB DATE	83
NOTE	83p.; Developed as part of the International Understanding Project. Photographs may not reproduce clearly.
PUB TYPE	Guides - Classroom Use - Guides (For Teachers) (052)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	Cognitive Ability; Critical Thinking; Decision Making Skills; Energy; *Futures (of Society); *Global Approach; Instructional Materials; Learning Activities; *Problem Solving; Secondary Education; Teaching Guides; Values Education
IDENTIFIERS	*Interdependence; United States (Intermountain West)

ABSTRACT

Activities to supplement secondary school global or future studies courses in the 10 state Mountain West region are presented in this teacher handbook. Material is divided into 3 sections. Section 1, an introduction to international connectedness, contains 7 activities focusing on the Mountain West's interdependence with the rest of the world. A variety of strategies such as role plays, surveys on local food and energy sources, and data interpretations enable students to experience and discuss interdependence. For each activity, objectives, necessary class time, materials and procedure are outlined. Section 2 contains 8 activities created by the Cognitive Research Trust thinking program to develop students' thinking and problem-solving skills. The activities provide training in the following skills: evaluating ideas and options; considering all factors; exploring consequences and sequels of a decision; considering aims, goals, and objectives of an action; setting priorities; and identifying alternatives, possibilities, and choices in problem solving. An introduction outlining the objectives, format, materials, allocated time, procedure, and follow-up common to all the activities in this section is followed by separate readings describing each activity. Section 3 consists of student handouts which support the activities described in Sections 1 and 2. The handbook concludes with a form for evaluating and commenting on activities. (LP)

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THE MOUNTAIN WEST AND THE WORLD:

INTERNATIONAL CONNECTIONS AND ALTERNATIVE FUTURES

- A Handbook of 15 Activities
for Secondary Classrooms -

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SP 015 301

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INTERNATIONAL UNDERSTANDING PROJECT
DIVISION OF CONTINUING EDUCATION
AND COMMUNITY SERVICES
WEBER STATE COLLEGE
OGDEN, UTAH 84408

PRINTED IN THE UNITED STATES OF AMERICA

THIS VOLUME CONTAINS ALL TEACHER AND MOST STUDENT MATERIALS NECESSARY FOR CLASSROOM USE.

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SECTION I

INTERNATIONAL CONNECTIONS

INTRODUCTION TO TEACHERS

This volume was developed under a grant from the U.S. Department of Education, International Understanding Program, ESEA of 1965. It is intended for use in classrooms in the ten-state Mountain West region of the United States (Arizona, Nevada, New Mexico, Colorado, Utah, Idaho, Montana, South Dakota, North Dakota and Wyoming).

Contained in this handbook are a variety of supplemental teaching activities designed to complement existing curricula related to global studies and future studies. It is not intended to be used as a text or self contained unit. Nor is it, in any sense, a definitive work on interdependence, futures or the Mountain West region. Some of the activities are discussion starters, some present factual data and some focus on critical thinking skills. The grade levels intended for these activities are junior - senior high school, grades 7 - 12.

OUTLINE

SECTION ONE: INTERNATIONAL CONNECTIONS

This section deals with the concept of interdependence. It is designed to have students develop a working definition of the concept and to gain some understanding of systems and their importance in students' lives. The activities stress the significance of interdependence as an explanation of why the Mountain West is not and cannot be isolated from the rest of the world.

Knowledge - Participants will be exposed to major issues of today's world: interdependence and increasing our capacity to make good decisions about the future.

Teaching Strategies - These activities depart from the standard expository didactic approaches found in most curriculum materials. Whenever possible, students are presented with opportunities to experience interdependence and think about the future. Moreover, the variety of strategies employed departs from the "read and recite" format of many materials on the market.

Many activities employ discussion as their primary teaching strategy. However, instead of simply giving students a topic or issue to discuss, the lessons provide an activity or starter exercise to spur interest in the topic or issue. Discussion can then proceed with more enthusiasm. Other teaching strategies used are data interpretation, role playing, and using community resources.

When and Where to Use the Activities - These activities are designed to be used with adult audiences and in junior and senior high schools. Most of the materials are easily adaptable for use in upper elementary grades as well.

In the school curriculum they are appropriate supplementary materials in just about any course of study related to global issues. Specifically, they can be used in world issues, social studies, population and environmental problems, contemporary problems, government, and economics.

Evaluation - Many of these materials have been used with a great deal of success by group leaders and teachers in the

Mountain West region and in many other school districts in the United States and elsewhere. It is our intention to continue revising and adding to the material whenever time permits. Accordingly, we have enclosed an evaluation sheet on the last page of the handbook. We encourage you to use the activities you think are most adequate to serve your needs; fill out the evaluation form; and send it to us for continued feedback. Your input will be greatly appreciated.

ACTIVITY #1

Title: **WHAT IS INTERDEPENDENCE?**

Introduction:

As a starter students need to gain some understanding of the phenomenon of interdependence. This activity illustrates the phenomenon by using the concept of a system. A system is made up of interrelated parts, and its proper functioning depends on how well these parts work together. If one of the parts breaks down, the whole system is affected. For example, one can directly experience system breakdown in a car. If one part of the electrical system is not functioning properly, it will affect the entire operation of the car. The battery, cables, spark plugs, alternator, voltage regulator, etc., must all be in working order. Moreover, this system must work in harmony with many other systems to make the larger system--the car--work.

Since a car is a complicated system and set of subsystems, this lesson uses a much simpler example for students to comprehend. Students assemble flashlights to learn about interdependence and the functioning of a simple system.

Objectives:

To solve the problem of assembling a working system -- a flashlight

To deduce working definitions of a system and interdependence based on students' experiences with flashlights

Time: 45 minutes

Materials:

A flashlight for every five to six students. It is suggested that students bring flashlights from home rather than purchase them.

Procedure:

Step 1 - Divide class into groups of five or six each. Each flashlight should be disassembled and put in a paper bag so that each student has a part of a flashlight. However, the parts should be allocated so that no one group has all the parts necessary to put together a functioning flashlight.

Step 2 - Ask each student to answer the following questions on paper:

1. Name your part of the flashlight.
2. What function or purpose does your part serve to make the whole flashlight work?
3. What other parts do you have to have to make the whole flashlight work?

Step 3 - Tell each group to assemble the pieces they have so that all the parts together perform a function that could not have been performed by the parts separately. When they can't get their flashlights to function, ask why.

NOTE: Students may see immediately that they need parts from another group in order to complete their flashlight. Don't allow exchange of parts until after discussion of why they can't make their flashlight work.

Step 4 - Have them trade with other groups to get the parts they need. When each group has assembled a working flashlight, ask the following questions:

1. If the working flashlight is a system and the parts were not, what is a system?
2. How would you describe the relationship between the parts?
3. Are there any smaller (sub)systems in the flashlight?
4. What does it mean to be independent? Dependent? Interdependent? What are some other types of systems? (Be sure students identify some of the parts, how they work, or what function they perform. If they don't suggest any, ask specifically for systems in which people are important parts, e.g. classroom, transportation, government system. Ask students to identify some of the functions people perform in such systems.)

Adapted from Global Perspectives: A Humanistic Influence on the Curriculum, Patterns for Teaching Interdependence, Part C, 7-9; Part D, 10-12. Global Perspectives in Education, 218 East 18th Street, New York, NY 10003.
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ACTIVITY #2

Title: THE WORLD IN YOUR SUPERMARKET

Introduction:

As a follow-up to Activity 1, this activity brings home the idea of global interdependence by asking students to list products at a supermarket and countries that are involved in the sale, manufacture and distribution of those products.

Objectives:

To increase students' awareness of the phenomenon of global interdependence

Time: 45 minutes

Materials: Handout 1

Procedure:

Step 1 - Make arrangements with a neighborhood supermarket to have students visit for this activity. Explain to your contact person at the supermarket that your class will be looking at products and ingredients to find out where they come from.

Step 2 - Distribute copies of Handout 1 to students.

Step 3 - Ask students to read Introduction on Handout 1. Ask for any questions.

Step 4 - Ask students to follow the instructions on Handout 1 when they get to the supermarket.

Questions:

1. How many of the products you listed represent more than one nation in their manufacture, sale or distribution?
2. The introduction in Handout 1 uses the word "interdependence." What does it mean to say "A supermarket is a good example of global interdependence"?

ACTIVITY #3

Title: **MAPPING CONNECTIONS**

Introduction:

This is a follow-up activity to "The World in Your Supermarket." Students locate nations and regions of the world where products they listed on Handout 1 were manufactured, and draw lines connecting them. The completed map will show graphically how the phenomenon of interdependence works.

Objectives:

To build geography skills by asking students to locate nations and regions of the world

To illustrate graphically the phenomenon of global interdependence

Time: 30 minutes

Materials: Handout 2; atlas or world map

Procedure:

Step 1 - Distribute one copy of Handout 2 to each student in your class.

Step 2 - Using a world atlas or world map as an aide, locate the cities and countries you listed on Handout 1 and make a dot for each on the appropriate space on Handout 2.

Step 3 - Locate your city on the map and draw a dot to represent it.

Step 4 - Draw lines connecting each of the dots to your community on the map.

Questions:

1. How does your map illustrate the idea of global interdependence?
2. How does your supermarket link your community and geographic region with the rest of the world?
3. "It is virtually impossible to 'buy American.'" Explain this statement.

ACTIVITY #4

Title: **INTERDEPENDENCE BINGO**

Introduction:

This activity provides for review of the concept of interdependence. Students enjoy the interaction this activity has to offer while learning more about each other and about interdependence.

Objectives:

To recognize how interdependence affects the lives of students personally.

To learn about other students and their linkages with other countries.

Time: 30 minutes

Materials: Handout 3

Procedure:

Step 1 - Distribute one copy of Handout 3 to each student.

Step 2 - Explain to students that they will be playing Interdependence Bingo much the same way as they have played regular Bingo.

Step 3 - The object of the game is to "cover" five spaces in a row--5 across, 5 down, or 5 diagonally. A space is covered when a student finds another student in the class who can answer the question or statement in a particular space on the Bingo sheet. The student who can answer the question or statement then "covers" the space by signing his/her name at the bottom of the space.

Step 4 - A Bingo is attained when a student has acquired five different signatures in a row. In other words, to get a Bingo, a student must get five spaces signed, each with a different signature and all in a row--vertically, horizontally or diagonally.

Step 5 - When a student gets a Bingo, he/she should say outloud, "Bingo!" Then, all students should return to their chairs so that the Bingo can be verified.

Step 6 - Verifying the Bingo--Each person who signed one of the five spaces should be asked what their answer to the statement in the appropriate space is.

ACTIVITY #4 (Continued)

Debriefing:

1. Which statements in the game were most difficult to find someone to answer? Why?

2. What if we had decided that a Bingo would be attained only if someone got a blackout, that is, all spaces signed? Would a blackout be possible in this class? What spaces would have prevented it?

3. How does this activity illustrate the idea of interdependence?

ACTIVITY #5

Title: LINKING THE MOUNTAIN WEST AND THE WORLD

Introduction:

The series of four photographs that accompany this activity is designed to help students make mental linkages between the rest of the world and the Mountain West region of the United States. Students list the products representing the industries depicted in the photographs and relate interdependence to their own communities.

Objectives:

To trace linkages between manufacturing, industry, and agriculture in the world with products used in the United States

To recognize the impact of the global system of manufacturing and trade on the Mountain West

Time: One hour

Materials: Handout 4 and Photographs 1 - 4

Procedure:

Step 1 - Distribute copies of Handout 4, one to each student.

Step 2 - Ask students to do the following:

a. The Mountain West region has been defined as a ten-state geographic area for this handbook: New Mexico, Arizona, Utah, Nevada, Colorado, Wyoming, Idaho, North Dakota, South Dakota, and Montana. In heavy black pencil or ink, outline the region on Handout 4.

b. Label each state in the region.

c. Locate your city or town in the region and place a dot to denote its location.

Step 3 - Ask students to use Handout 4 as a reference for doing the rest of the activity.

Step 4 - Display photos 1, 2, 3 and 4 so that students can study them.

Step 5 - Photograph 1: This photograph shows a finishing mill rolling sheet in the Funukawa Aluminum Company works near Tokyo, Japan. Aluminum, magnesium and zinc products are made by the company in which the Aluminum Company of America holds an interest.

ACTIVITY #5 (Continued)

a. What are at least five major uses of aluminum in the students' community?

b. List five products used in your community that would make it interdependent with ALCOA's mill in Japan. List these products (or draw them) on the map.

Step 6 - Photograph 2: This photograph depicts pack animals transporting coffee in the Dominican Republic. (Pan American Coffee Bureau)

a. Find out from a local supermarket the average pound-per-day sales they make in coffee.

b. Add coffee to the products on the map.

c. How does coffee make your community interdependent with the Dominican Republic and with other coffee-growing nations?

Step 7 - Photograph 3: Smelting and refining works at La Oroya, Peru (Cerro Corporation). La Oroya is a center for smelting and refining of metal ores--copper, silver, lead and zinc. Copper has many uses including: electrical conductors, tubes and pipes, bearings, wire, coins, alloys for ship hulls. Uses for silver include photographic film emulsions, mirrors, jewelry, dental work. Uses for lead include ammunition, brasses and bronze, paints and pigments, gasoline additives. Uses for zinc: production of bronze and brass; paints, varnishes and lacquers; tubes and pipes; medicines.

a. List at least five products for each metal smelted and refined at the works in La Oroya--i.e., five products for copper, five for silver, etc. All products should be used somewhere in the Mountain West as outlined on the map (Handout 4).

b. List the 20 products asked for above within the Mountain West region on Handout 4.

Step 8 - Photograph 4: Wheat landscape in Great Plains; Winter wheat is grown in Eastern Colorado. Spring wheat dominates South Dakota and North Dakota.

a. How does our production of wheat make the rest of the world interdependent with the Mountain West?

ACTIVITY #6

Title: ENERGY: A LOOK AT THE MOUNTAIN WEST

Introduction:

The maps for this activity (Handouts 9-14) show the location of some of our nation's renewable resources. Students focus on the feasibility of using renewable sources of energy within the Mountain West and their own communitites. The maps suggest that we look more deeply into an accurate pinpointing of usable resources within our own locales.

Objectives:

To familiarize students with major locations and patterns of sunshine, wind speed, water, hot springs, wood and fossil resources (coal, gas and oil)

To locate possible sources of renewable energy within the Mountain West region

To stimulate further investigation into feasible use of renewable resources for use in students' communities

Time: One hour

Materials: Handouts 9-14

Step 1 - Distribute Handouts 9-14 to each student.

Step 2 - Ask students to look at Handout 9. How practical would geothermal power be for use in the Mountain West? (Where are hot springs located? How near are they to your community? Find out from a local college or library information on what kind of a delivery system it would take to bring geothermal power to your community. Does it already exist there? Could those hot springs located nearest your community actually be used to generate power?)

Step 3 - Ask students to look at Handout 10 and determine how practical solar power would be for use in their homes. (They will need to look further than the map. The map only denotes general areas of sunshine. Houses would have to have roofs with a southern exposure, unencumbered by trees or any other kind of shade. What other modifications to their homes would students need to make?)

Step 4 - Ask students to look at Handout 11 and determine how practical wind power would be for their community.

ACTIVITY #6 (Continued)

Step 5 - Ask students to look at Handout 12. Ask them to determine the feasibility of water power in their community. (Are power companies consuming more fossil fuels in making electricity than they would if there were better use made of hydroelectric power?)

Step 6 - Ask students to look at Handout 13. Ask students to compare the location of fossil resources with the location of renewable resources on Handout 14. Does the location of the resources on Handout 13 give a clue as to why we might be dependent on them? What other factors might be involved?

ACTIVITY #7

Title: ENERGY AND INTERDEPENDENCE: COMMUNITY ATTITUDES

Introduction:

Community attitudes about interdependence can reveal some interesting levels of awareness about its impact on energy. Since energy is a major issue for the Mountain West region, this activity should help students gain insight into the prevailing attitudes in their community. The survey contains eight questions created by the Federal Energy Administration. The randomly sampled national findings can be used to compare community attitudes and behavior with national attitudes and behavior.

Objectives:

To survey people in the community regarding their attitudes about key aspects of interdependence and energy

To compare community attitudes with those taken in the national survey

Time: Three hours

Materials: Handout 15 - "Questionnaire"
Handout 16 - "National Survey Results"

Procedure:

Step 1 - Divide class into pairs of students.

Step 2 - Distribute copies of Handout 15, one to each student.

Step 3 - Using a city map, divide the local community into sections. Ask students to survey a minimum of ten persons (per pair) in each section of the community, at random.

Step 4 - After students have collected data, appoint a committee to tabulate the results and put the results on the chalkboard or on an overhead transparency.

Questions:

1. Which questions evoked the strongest responses from interviewees?
2. Distribute copies of Handout 16, one per student. How do your community's attitudes compare with those in the national survey?
3. How would you assess the level of awareness in your community about interdependence? About energy?

SECTION II

ALTERNATIVE FUTURES

INTRODUCTION TO TEACHERS

Improve your thinking - the most important human skill that you can develop. Dr. Edward de Bono, Director of the Cognitive Research Trust (CoRT) in Cambridge, England, has stated that:

> Thinking underlies every other skill in life. The more we improve our thinking skills, the more we automatically improve every other skill. There is no area of investment that can provide a greater return than in investment of time and effort in improving our thinking. If we want to be masters of our own fate, we have to learn to think well. In making decisions, planning, initiatives, ventures, problem-solving, conflict, creativity and all sorts of situations, it is to our direct and personal advantage that we be able to think deliberately, confidently, effectively.

Recognizing the importance of thinking, Venezuela has become the first nation in the world to put the teaching of thinking skills into the school curriculum as a subject in its own right. Presently, over 1.2 million school children and 42,000 teachers are being taught thinking skills. The Venezuelan project is important because it shows that the teaching of thinking skills directly is no longer a dream or a matter of research discussion but a practicality. Elsewhere in the world the CoRT Program (Cognitive Research Trust) has been in use for over eight years and is now used by more than 5,000 schools in England, Scotland, Wales, Eire, Australia, New Zealand, Canada, Spain, Malta and Nigeria. A report from Canada indicates that there is a growing response from superintendents and directors of school boards for the CoRT Program.

SECTION TWO: **ALTERNATIVE FUTURES**

This section was developed by Dr. Eric Bienstock, Managing Director of the CoRT thinking program in New York City. Its focus is on process--helping students think through possibilities and consequences in decision making about the future. A more lengthy discussion of the process and activities precedes the activities in Section Two.

OBJECTIVES

Because of the supplementary nature of these activities, the objectives for each lesson are varied. Taken as a whole, the activities attempt to reach objectives in three areas--discovery skills, values and values clarification, and the development of lateral thinking skills.

Discovery Skills - Skills emphasized in these activities are as follows:

1. Collection of Data
2. Data Analysis
    A. Interpretation
    B. Synthesis
    C. Application
    D. Evaluation
3. Hypothesis Formation
4. Hypothesis Testing
5. Interpretation of Graphs and Tables
6. Decision Making

No single activity teaches all of these skills. However, many of the lessons include one or more of them.

Values - Values clarification objectives are as follows:

1. Examining values in light of new evidence.
2. Verbalizing value positions when appropriate.
3. Choosing from alternative values when appropriate.
4. Acting on values in light of new consciousness about interdependence and alternative futures.

This is not surprising for two Canadian studies showed that at the university freshman, senior and graduate level, there was a conscious lack of skill in thinking and problem solving and a feeling that this ought to have been taught earlier in education. (1) (4)

This attitude towards the teaching of thinking skills is supported by Professor George Gallup: (2)

> In the annual surveys of the public's attitudes toward the schools in the United States, conducted by the Gallup Poll, we find that of all the goals of education, teaching students to think is always rated as the very most important by the public. And yet, in the United States and elsewhere, one finds little or nothing being done on a systematic basis to teach students to think.

It was a consciousness of this need and this deficiency that led to the development of the CoRT Thinking Program ten years ago. Since then a huge amount of experience with the direct teaching of thinking across all ages and abilities has been collected. One important concept that has been confirmed is that the actual teaching of thinking skills is quite different from the theorized teaching of thinking skills. In the initial stages, many schools and educational psychologists would have long theoretical discussions about likely problems. In practice these problems never occurred in the classroom. More importantly, effects which could not easily have been predicted in theory became very obvious in the classroom. For example, younger pupils who had been academically regarded as less able suddenly turned out to be most effective thinkers. High IQ levels do not automatically result in effective thinking skills. Indeed, a high IQ level may actually expose a

person to the danger of the "intelligence trap." This means that a high IQ may actually prevent effective thinking. There are many components to this; for example the ability to defend in an articulate and fluent manner any initial point of view makes the thinker much less inclined to explore the subject. The realization that even the more gifted pupil needs to pay conscious attention to the development of thinking skills reinforce the intention to develop a practical program for teaching such skills.

PROGRAM GOALS

* To improve your ability to analyze problems and to generate creative solutions.
* To develop practical skills that will increase your effectiveness to accomplish tasks.

FORMAT

This section of the handbook is divided into eight skill training activities:

Titles: [Activity discussions follow]

Activity 8: PMI: The Treatment of Ideas
Activity 9: CAF: The Factors Involved
Activity 10: C & S: Consequence and Sequel
Activity 11: AGO: Objectives
Activity 12: FIP: Priorities
Activity 13: APC: Alternatives
Activity 14: OPV: Viewpoints
Activity 15: Decisions

OBJECTIVES

Primary objective for each activity:

To be able to apply the particular skill, at will, to any situation. (e.g., to be able to do a PMI

whenever the student wishes to look at the plus, minus and interesting points of an idea, suggestion, etc.)

Secondary objective for each lesson:

To understand the principles associated with each skill. (e.g., to understand that "the PMI is important because without it you may reject a valuable idea that seems bad at first sight.")

GRADE LEVEL

Grades 9 through 12

MATERIALS

Handout
Watch with minute hand
Paper, pencils/pens

TIME

For each activity, 45 minutes total (See PROCEDURES for breakdown.)

PROCEDURES [Numbers in parentheses represent number of minutes required.]

1. (1) Have students form groups of 4 to 6 students each.
2. (4) Have students read back to each other, within their groups, the results of their projects from last lesson.
3. (4) A volunteer from each group reads his/her project results to entire class.
4. (1) Teacher hands out today's lesson.
5. (½) A volunteer reads aloud the introduction box.
6. (½) A volunteer reads aloud the "example."
7. (3) The students process practice item #1, within their groups. [One student in each group keeps notes of output.]
8. (1) Teacher selects one group which reports its output to entire class.
9. (2) Other groups and/or individual students may add points which were not reported by the selected group.
10. (6) Repeat steps 7 - 9 with practice item #2.
11. (9) Brief discussion among entire class of the lesson. The questions in each lesson can be related to, or any other points which the students or teacher bring up.
12. (6) Repeat steps 7 - 9 with practice item #3.

13. (1) Students read the "Principles" to themselves.
14. (5) A volunteer reads to the class Principle A, adding a brief comment of his/her own on what he/she thinks of it. Repeat this with Principles B, C, D, & E.
15. (1) Teacher reminds students to do the "Project" for homework.

NOTE: Total time for each lesson can be extended by providing additional practice items or shortened by eliminating steps 8 and 9. It is not recommended, however, that any lesson contain fewer than three practice items.

FOLLOW-UP: "PROJECT"

For each lesson, the teacher designs a "project" for the students to do for next time. At the end of each lesson, the teacher tells the class what the project is, and they write it down on the student lesson notes in the space provided (see step 15 under Procedures). At the next class, the results of the students' projects are reported (see steps 2 & 3 under Procedures).

The aim of the project is: (1) To provide an opportunity for the students to get additional practice using the particular thinking skill; and (2) To provide an opportunity for the students to apply the particular thinking skill to some relevant issue in the world (i.e., application of the particular thinking skill in the context of "international connections and alternative futures").

An example of a project assignment is as follows:

Choose a suggestion, proposal or idea put forth by the President, from the newspaper--one which would affect another country's economy in some way as well as ours.

1. State the idea, briefly, in your own words (less than 20 words).
2. Do a three-minute PMI on the idea.
3. What is your opinion of the idea?

EVALUATION:

See excerpted comments by Edward de Bono.

DETAILED INTRODUCTION

FOR EACH OF THE ACTIVITIES

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ACTIVITY 8

PMI: THE TREATMENT OF IDEAS

This is a very basic lesson which is brought in right at the beginning so that the PMI process can itself be used as a tool in the course of subsequent lessons. The thinking operation involves looking for the plus points (P), the minus points (M), and the interesting points (I) in any idea you come across. The natural reaction to an idea is to like or dislike it, to approve or disapprove. If you do like an idea, it is very unnatural to look for the negative or minus aspects. If you dislike an idea, it is very unnatural to look for the positive or plus aspects. It is also unnatural to pick out the aspects of the idea which are neither liked nor disliked but are simply very interesting. In the course of subsequent lessons, if someone dislikes an idea he or she can be asked to do a PMI on it.

Having the PMI as a deliberate operation gives the person a means of by-passing the natural emotional reaction to an idea. His object changes from emotional reaction to carrying out with skill a formal operation.

The PMI is never intended to prevent decision or commitment but to ensure that this happens after both sides of the matter have been considered and not before.

In simple terms the PMI operation enlarges the view of a situation since without it the emotional reaction to an idea narrows the way we look at it.

ACTIVITY 9

CAF: THE FACTORS INVOLVED

CAF means "Consider all factors."

This thinking operation is essentially related to action, decision, planning, judgment and coming to a conclusion. Everyone naturally assumes that he or she does always consider all the factors, but usually this consideration is limited to the obvious ones. Turning CAF into a deliberate operation switches attention from the importance of the factors to looking around for all the factors. Importance can then be assessed after all the factors have been thought of instead of before.

The emphasis of the lesson is on the factors that have been left out in a decision, plan, etc. For instance, in a subsequent lesson or in another subject, when an individual comes to a conclusion based on only some of the factors involved, he/she can be asked to do a CAF on the situation before it is pointed out to him/her what has been neglected.

CAF differs from PMI because PMI is a reaction to an idea whereas CAF is an exploration of a situation before coming up with an idea. The two do sometimes overlap because some of the factors that have to be considered obviously have a plus or minus aspect. The intention with a CAF is to be as complete as possible and to consider all factors rather than to look at them in terms of favorable or unfavorable factors.

The lesson can be a difficult one because it is difficult to try and consider all factors. The emphasis must therefore be on what has been left out. For instance, each group tries to find factors that have not been put forward by the 'designated' group.

ACTIVITY 10

C & S: CONSEQUENCES

C & S stands for Consequence and Sequel.

When a CAF is done before some decision, among the factors considered might be the future consequences of that decision. This varies so much from person to person that the thinking operation concerned with looking ahead to examine consequences is treated as a separate operation instead of being an implied subdivision of CAF. In this way there can be no doubt about whether consequences have or have not been included in doing a CAF. In any case CAF tends to be concerned with factors that are operating at the moment and on which the decision is built, whereas C & S deals with what may happen after the decision has been made.

C & S is concerned with action of some sort. Either the action that one intends to take oneself or the action that others are taking. The intention is to enlarge the view beyond the immediate effect of that action. An action may seem worthwhile if the immediate effect is good. But if one makes a deliberate effort to look at longer term consequences the action may not be worthwhile at all. Conversely, an action that has good long term consequences may not seem very enticing at the moment.

C & S is divided into immediate consequences, short term (1 - 5 years), medium term (5 - 25 years), and long term (over 25 years). It is useful to keep these in mind as otherwise there is a tendency to think only in terms of a particular time scale (which may vary from person to person).

If CAF is thinking around a situation at the moment, then C & S is thinking ahead. Obviously consequences can also turn up as part of a PMI, but the important point about a deliberate C & S is that attention is focused directly on the future.

ACTIVITY 11

AGO: OBJECTIVES

AGO (pronounced A. G. O.) stands for Aims, Goals and Objectives.

In the lesson no attempt is made to distinguish between these. In some situations it is more appropriate to speak of aims, in other circumstances of goals, and in yet others of objectives. The main point of the lesson is to introduce and emphasize the idea of "purpose."

This notion of purpose broadens the perception of a situation. It is easy to look at a situation in terms of the reasons why it came about: that is the "because" aspect. It is less easy to look at it in terms of the purpose behind it: the "in order to" aspect. Being able to define objectives helps the person's thinking in such areas as decision, planning and action of any kind which has a purpose. Being able to see other people's objectives makes it easier for the person to understand their thinking and their actions.

Without a sense of purpose, all actions are either reactions to a situation or matters of habit or imitation. The intention of the lesson is to focus attention directly on purpose as distinct from reaction.

ACTIVITY 12

FIP: PRIORITIES

FIP (pronounced "fip") stands for First Important Priorities.

In most of the other lessons, the effort has been directed toward generating as many ideas as possible: as wide a PMI as possible; as many factors as possible for a CAF; as comprehensive a C & S as possible; all the different objectives, etc. This means that one can get into the habit of looking as far afield as possible. In doing this the distinction between what is really important and what is valid as another idea but rather trivial can get lost. The purpose of the FIP lesson is to restore the balance in a deliberate manner. The FIP lesson directs attention to what is important and what should be considered first. It is useful to generate as many ideas as possible provided that at some time you are going to pick out the most important. There is a very fundamental point here. If you try to pick out only the most important points from the start, you will be able to see only a small part of the picture. But if you start by trying to see as large a picture as possible, then your eventual assessment of importance will be much more valid. That is why the FIP lesson comes quite late in the series.

Like the PMI the FIP operation can be used in subsequent lessons or in other subject areas whenever some assessment of importance is required. If someone turns up an idea that is valid as an idea but not of great importance, he/she can be asked to do a FIP on the situation.

FIP is a judgment situation and there are no absolute answers. What one person believes to be most important another person may place far down the list of priorities. The intention of the lesson is to focus attention directly on to this assessment of importance. Once you can do a FIP, then you are free to generate as many ideas as you like first. If you cannot do a FIP, then you are only able to consider ideas that have an obvious importance at first sight--and you may well never get to consider any other ideas at all.

ACTIVITY 13

APC: ALTERNATIVES

APC stands for Alternatives, Possibilities, Choices.

In many situations there are obvious courses of action open to a person. In such situations the thinking involved is directed at choosing between these obvious courses of action. Very little, if any, of the thinking is directed to find out whether or not these are the only possible choices. The APC operation (like all the others) is an attempt to focus attention directly on exploring all the alternatives or choices or possibilities--beyond the obvious ones.

This deliberate search for alternatives applies not only to action but also to explanations. When an obvious explanation presents itself, it is very unnatural to look beyond it to try and find other possible explanations. That is why it is useful to have a device which can take on beyond natural inclinations.

The APC device is an antidote to emotional reaction. Whenever a person seems to be looking at something in rather a rigid way, he/she can be asked to do an APC. If he/she can do this, then the result is either that he/she comes to change his/her view or if he/she persists in his/her view, he/she is now holding it not because he/she could not see any other view but because he/she prefers it. Like many of the other thinking operations, APC can be used in other subjects.

As in the CAF lesson, the emphasis is on what has been left out. That is to say the goups try and find different alternatives and choices for the same situation to demonstrate

that even when you are sure that there cannot be any other possibilities, there may still be some if you make a deliberate effort to look for them. As with the CAF lesson, it is all too easy to suppose that one naturally looks at all the possible alternatives anyway--but it is not true. To go beyond the obvious and the satisfactory possibilities, one needs a deliberate device like the APC.

ACTIVITY 14

OPV: VIEWPOINTS

OPV stands for Other Point of View.

In the preceding lessons the enlargement of the situation, the broadening of perception, has always been from the point of view of the thinker. But many thinking situations involve other people as well. The point of view of these other people is also an essential part of the enlargement of the situation which is the basic theme of these first eight lessons. Thus another person may have different objectives, different priorities, different alternatives, etc. In fact when another person does a PMI, CAF, C & S, AGO, FIP or APC, he/she may come up with different ideas because he/she is in a different position. Being able to look at and understand another person's point of view may be a very important part indeed of the thinking process, and so a deliberate effort may have to be made to see another point of view. This deliberate effort is the OPV. It may apply to another person's point of view or to other people's points of view in general.

Like many of the previous operations, OPV as a tool can be applied in different subject areas. It may be applied by itself or it may be applied in conjunction with another operation: "Do an OPV-AGO for the other person." Once one can escape from one's own point of view, one cannot only take other people into consideration but one may even come up with a useful new way of looking at the situation. The OPV is an antidote to selfishness. Instead of a general vague feeling that other people matter, there is a deliberate attempt to see another person's point of view.

The emphasis must be on how the view of another person in the same situation may be entirely different. It is the possible difference between points of view that matters here. If it is assumed that any sensible person would have the same point of view in a situation, then no effort at all will be made to see other points of view.

ACTIVITY 15

DECISIONS

This lesson provides an opportunity to bring together the last two lessons, in particular (FIP and APC) and also the other lessons in a more general way. For instance in making a decision, CAF, C & S and AGO are obviously involved. A decision implies a leap into the unknown, a generation of alternatives and a choice between them based on the factors involved and the consequences. The various aspects of thinking covered in the preceding lessons help to increase knowledge of the situation to the point when the decision either makes itself or is at least easier to make because the alternatives are more numerous and the consequences better defined. In particular, the FIP process is important here. For instance an AGO may turn up a number of different objectives for the decision and then a deliberate FIP selects the most important. A C & S can then be done on the proposed decision and possibly a PMI as well. The lesson can be used to show the interplay of these different aspects of thinking.

Making decisions is, of course, a large subject in itself, and it is not the intention of this lesson to build up skill in this directly. The intention is to offer a certain awareness of what is involved in making a decision and to show how the thinking skills developed in the other lessons can be applied.

As with previous lessons, no attempt is made to dictate values or rules for making decisions. The aim is to enlarge the view so that in reacting to the situation, the individual has a broader view of it.

SECTION III

STUDENT HANDOUTS

HANDOUT 1

THE WORLD IN YOUR SUPERMARKET

Introduction:

A supermarket is a good example of global interdependence. The products there represent many nations. In this activity you are asked to increase your understanding of interdependence by listing products and determining where they were produced and/or manufactured.

At the Supermarket:

List at least 25 products that either contain foods grown or produced outside the United States or that were packaged outside the U.S. Beside each product list the countries involved in the sale, manufacture and transport of it.

	Products	Countries
Ex:	Tomatoes	U.S. Canada
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		

HANDOUT 1 (Continued)

	Products	Countries
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
21.		
22.		
23.		
24.		
25.		

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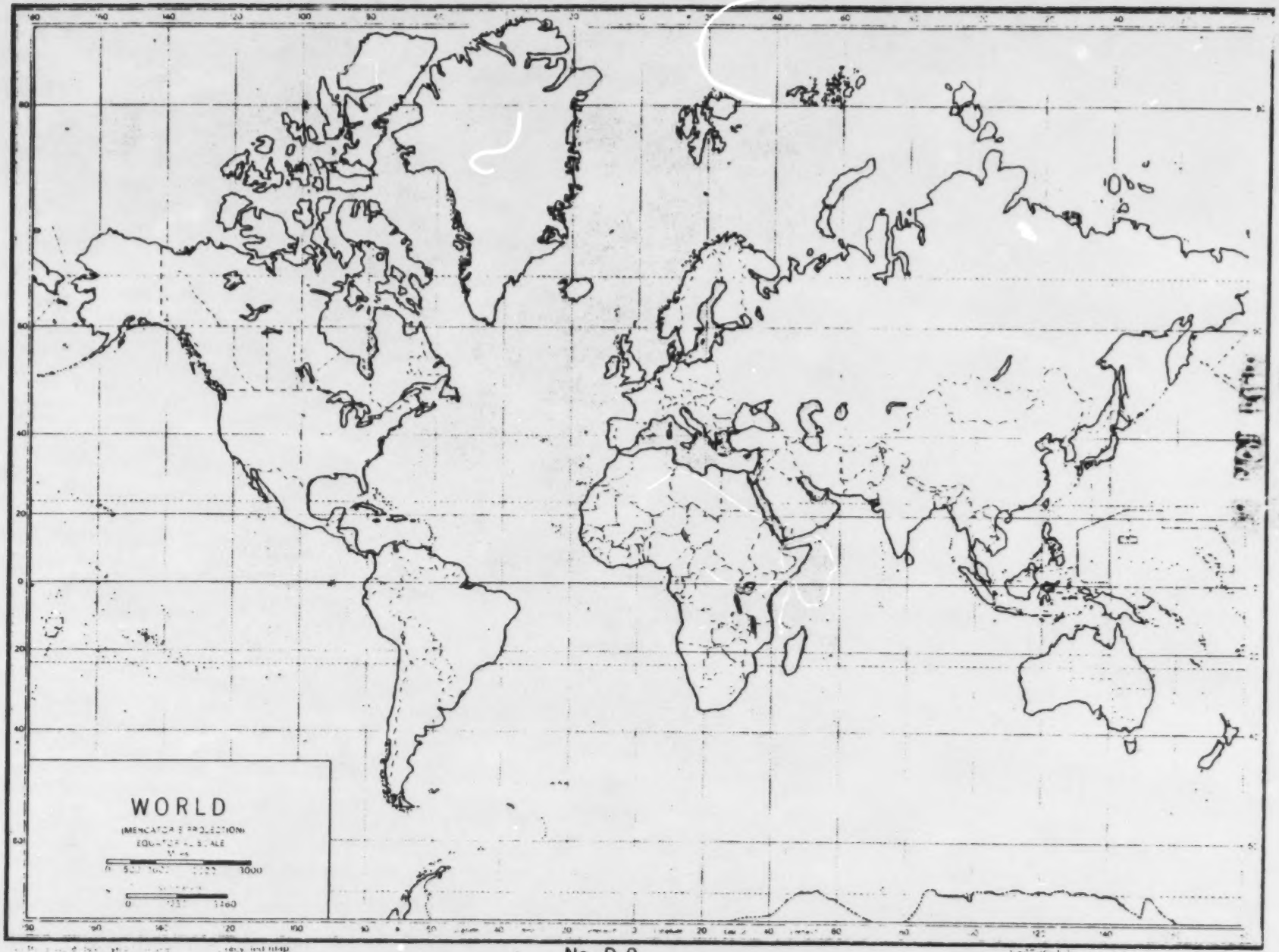

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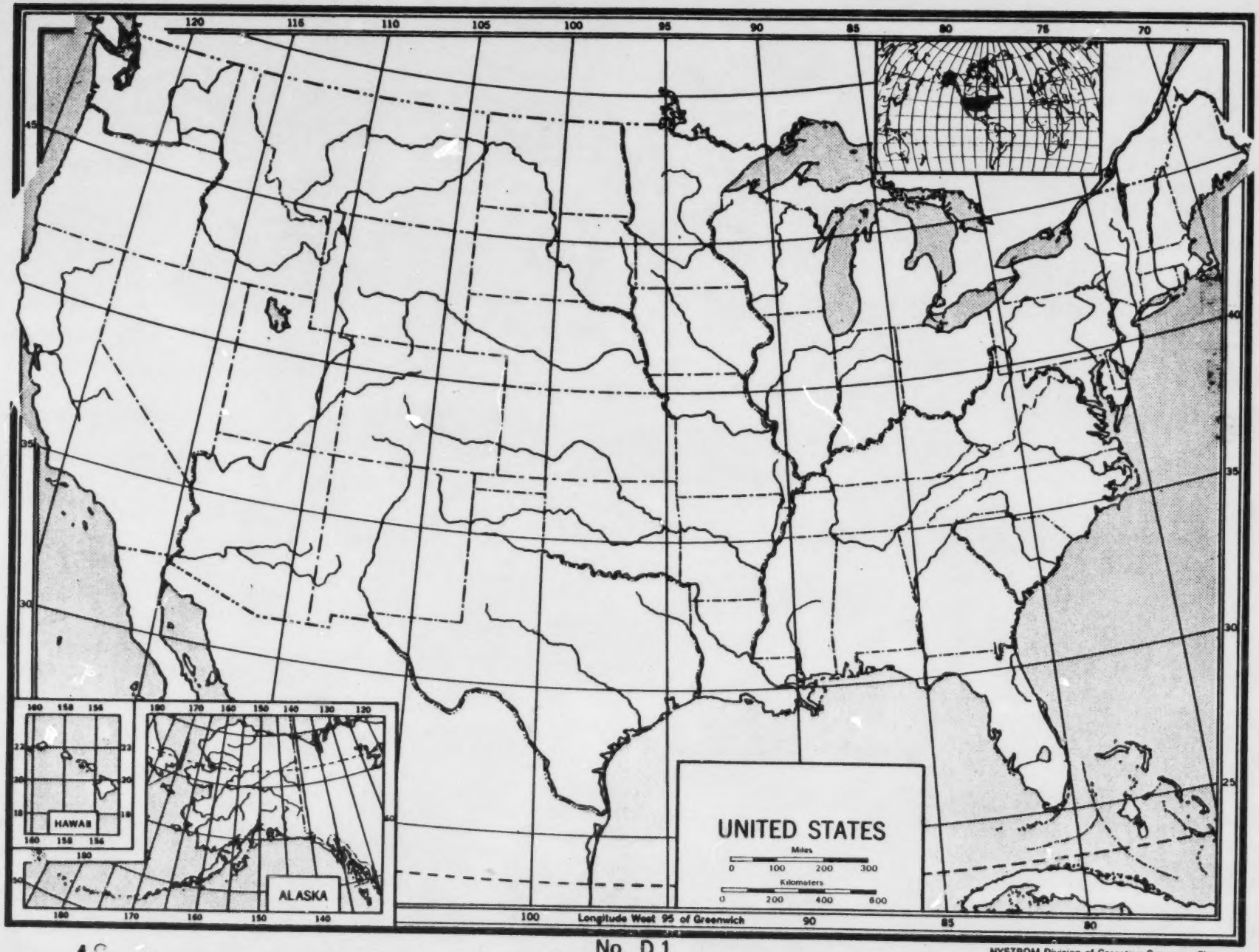
HANDOUT 3

INTERDEPENDENCE BINGO

Find Someone Who....

Speaks a second language	Can name one foreign author whom they've read	Has a foreign student living with them	Has a foreign car or whose parents own a foreign car	Has a foreign made motorcycle or bicycle
Owns a foreign made stereo	Has traveled in a foreign country within the last year	Is wearing foreign made sneakers	Likes the same kind of foreign food as you do	Was born outside the United States
Has ridden in a foreign car sometime this week	Has eaten French and Spanish food	YOUR NAME _____ _____	Has visited Mexico and Canada	Has a foreign born parent
Has a foreign made watch	Has made a phone call to another country within the last year	Has received a letter from a friend in another country	Has a sweater made in a foreign country	Can name five products in their home that were made outside the U.S.
Knows someone who was in the Peace Corps	Can name two products from Mexico	Has a family member living overseas	Is wearing clothes made in a foreign country	Knows how to dance a foreign dance



HANDOUT 4

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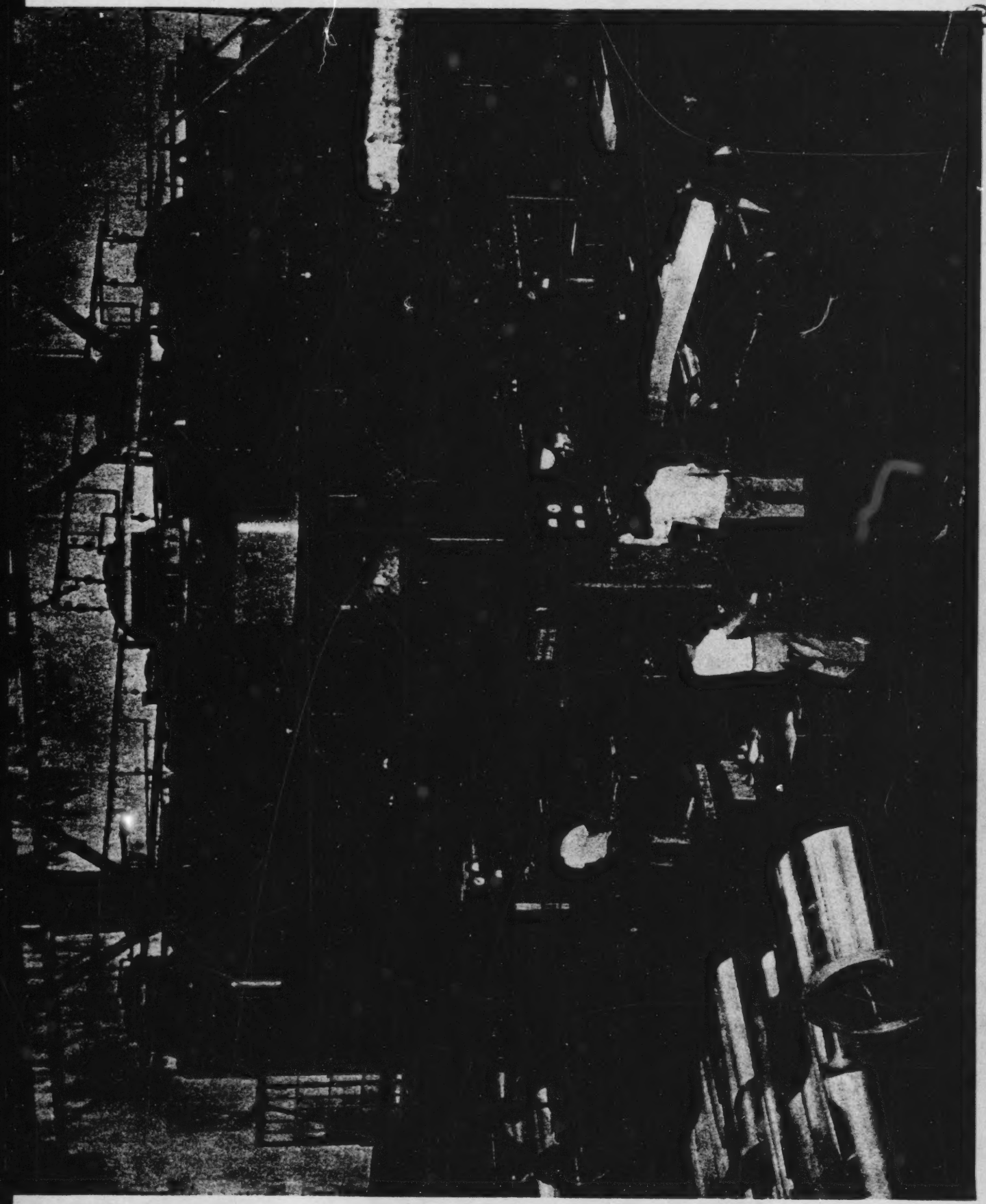

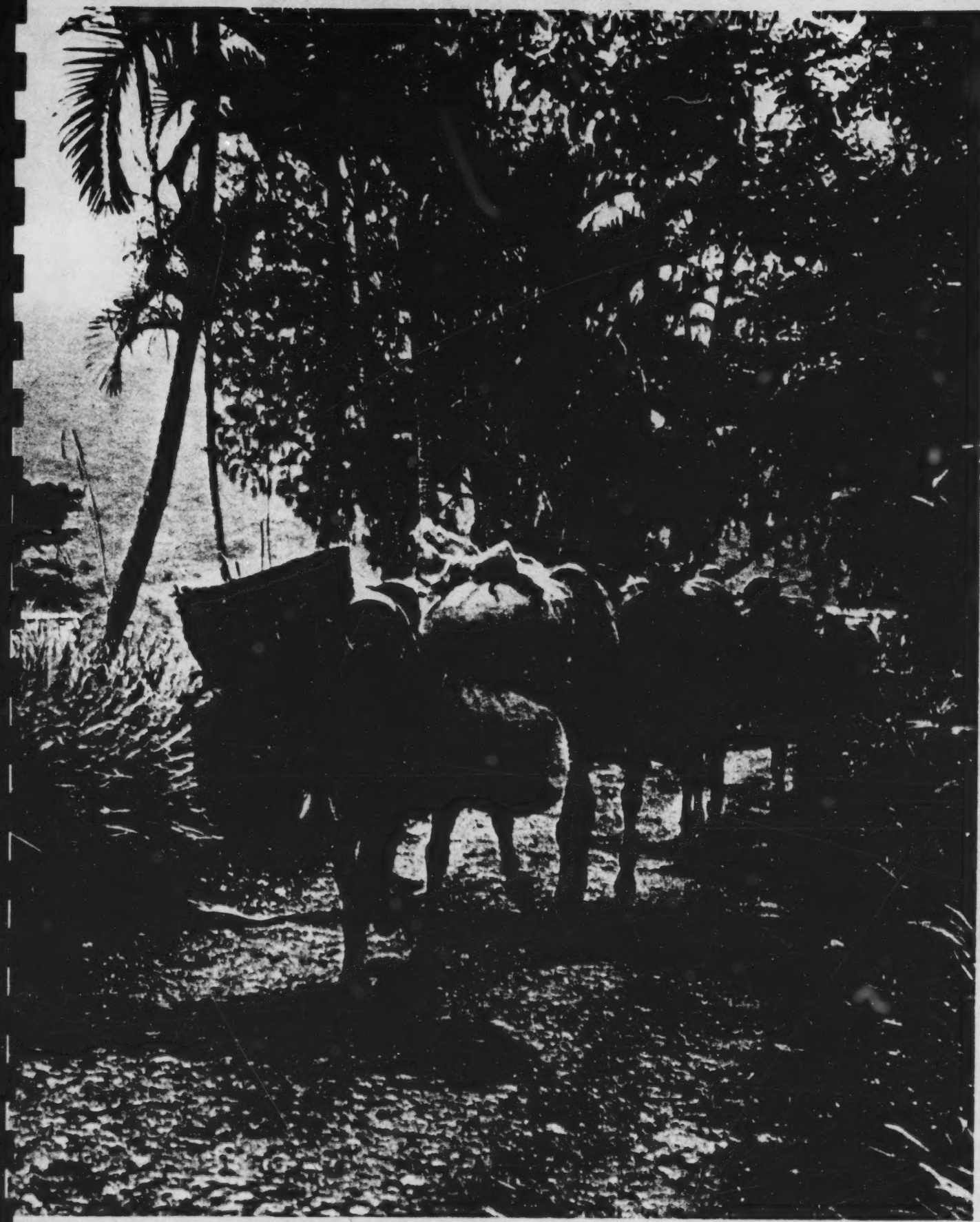

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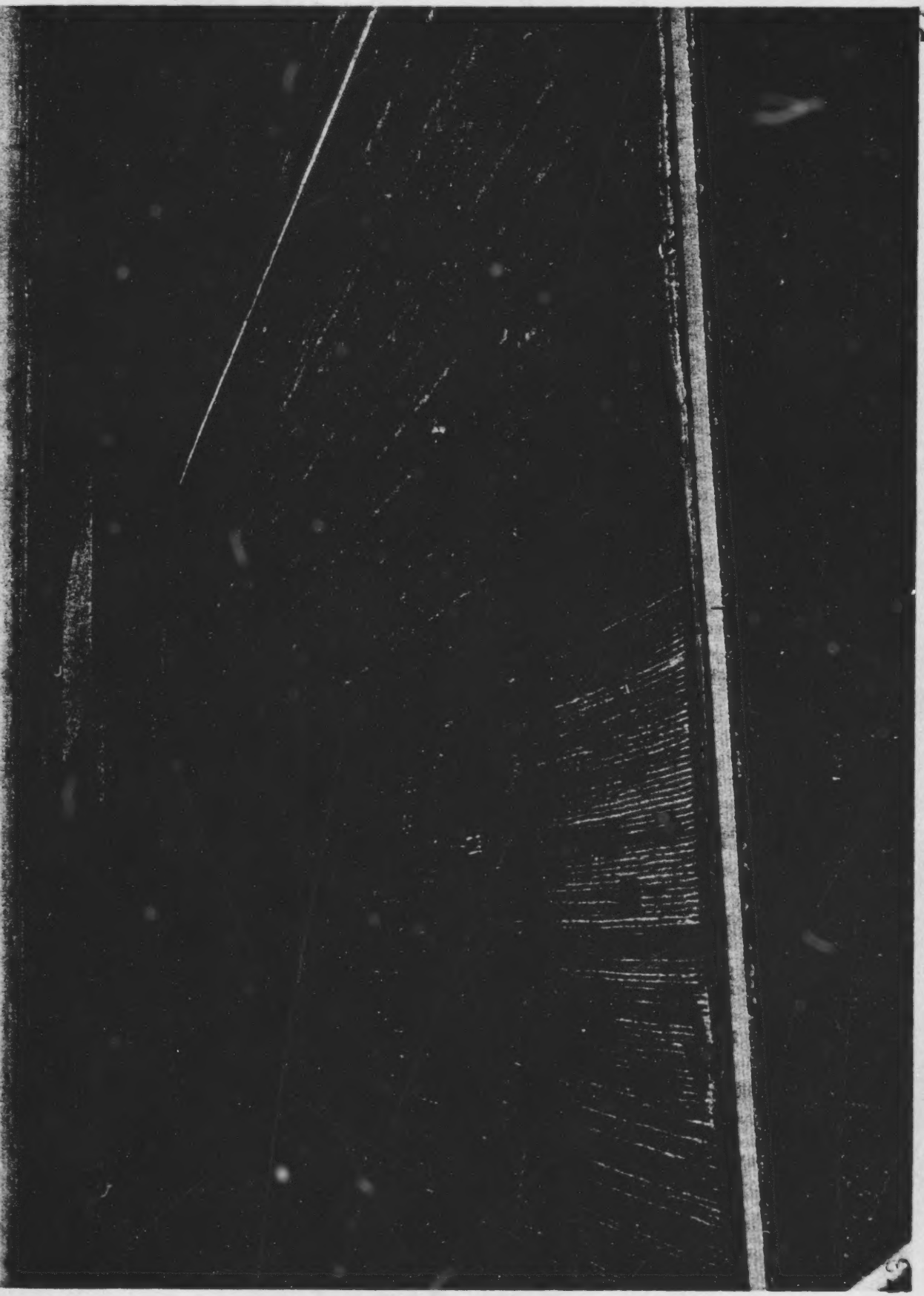

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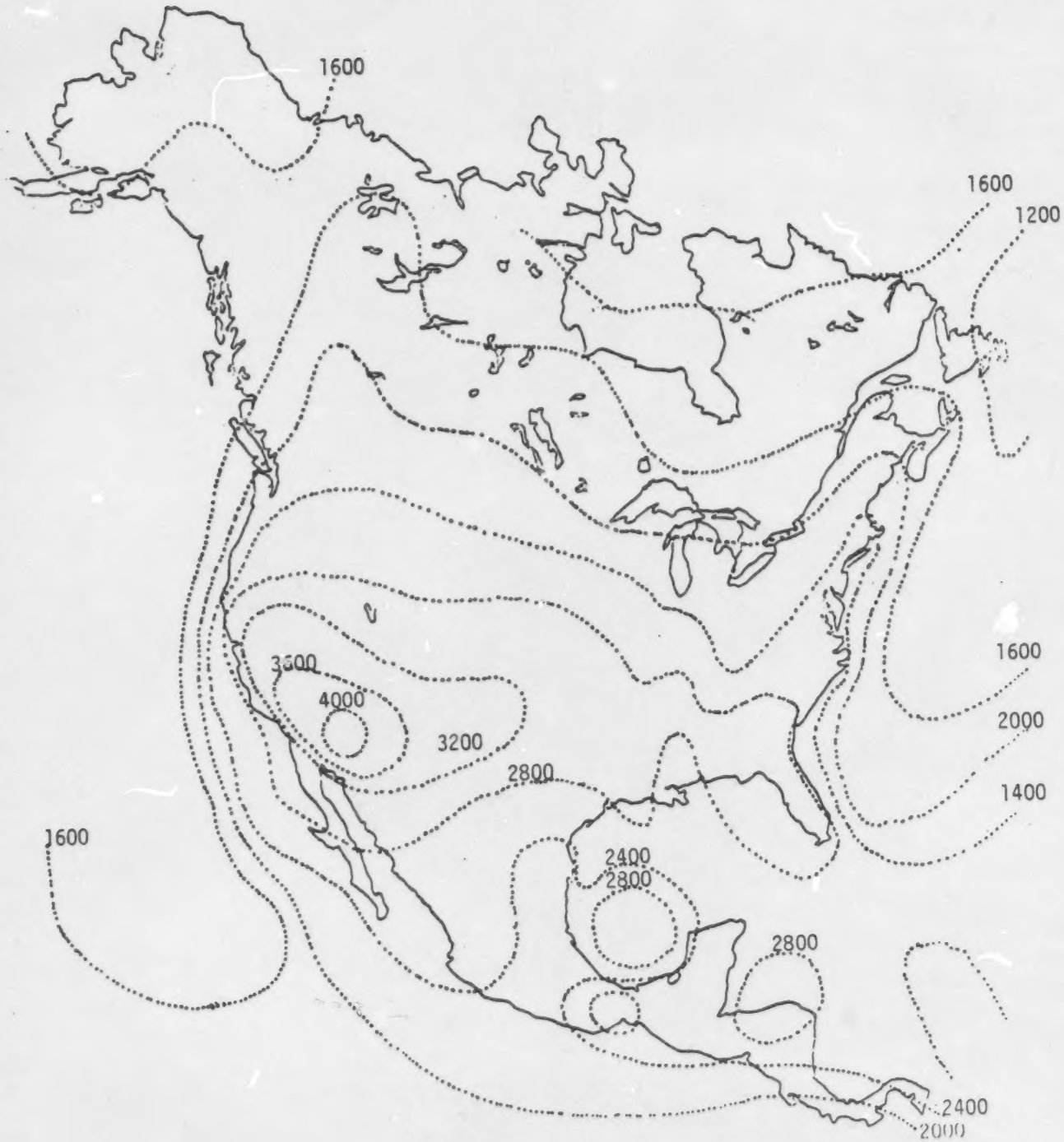
HANDOUT 10

HOURS OF SUNSHINE

Per Year



HANDOUT 9

HOT SPRINGS

USA Only

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HANDOUT 11

WIND SPEED

Winter

HANDOUT 12

WATER

Rivers and Tide

HANDOUT 13

Fossil Resources

HANDOUT 14

COMPOSITE MAP

Renewable Energy Resources

QUESTIONNAIRE

1. "We are going to read a list of eight things that might matter to you in your life. We would like you to tell us how much each thing matters to you. Please use a scale of one to five, with one being something that matters very little to you and five being something that matters a great deal. First, we will read all eight things. Then, we will go back and repeat each one individually so you can rate it 1,2,3,4, or 5....saving energy."

No. of Responses		Very Little				Great Deal
1 2 3 4 5 6 7 8 9 10	Job Security	1	2	3	4	5
1 2 3 4 5 6 7 8 9 10	Family Happiness	1	2	3	4	5
1 2 3 4 5 6 7 8 9 10	Saving Energy	1	2	3	4	5
1 2 3 4 5 6 7 8 9 10	Preventing Crime	1	2	3	4	5
1 2 3 4 5 6 7 8 9 10	Fighting Inflation	1	2	3	4	5
1 2 3 4 5 6 7 8 9 10	U.S. National Security	1	2	3	4	5
1 2 3 4 5 6 7 8 9 10	Preventing Pollution	1	2	3	4	5
1 2 3 4 5 6 7 8 9 10	Helping Others	1	2	3	4	5

Now we would like to ask--

2. In order to save gasoline, at how slow a speed would you be willing to drive on major highways, provided everyone else had to drive at the same speed?

1 2 3 4 5 6 7 8 9 10

49 MPH or less
50-54 MPH
55 MPH
56-59 MPH
60 MPH

3. How willing would you be to drive a small economy car to save gasoline, provided most of the cars you drove with in traffic and on highways were also small--would you be very willing, somewhat willing, or not too willing?

1 VERY WILLING
2 SOMEWHAT WILLING
3 NOT TOO WILLING
4 DON'T DRIVE
5 DON'T KNOW

4. In order to save heating fuel, at how low a temperature would you be willing to keep your thermostat set this winter, provided everyone else kept their homes at the same temperature?

67 DEGREES or less
68 DEGREES
69 DEGREES or above
DON'T KNOW

5.	How willing would you be to do your laundry or wash your dishes after 9:00 at night when the demand for energy is not as great as it is earlier in the day, provided everyone else did the same--would you be very willing, somewhat willing, or not too willing?	1 VERY WILLING 2 SOMEWHAT WILLING 3 NOT TOO WILLING 4 CURRENTLY WASH AT LATE HOURS 5 DON'T KNOW
6.	How willing would you be to help save energy by turning down the control on your hot water heater from "hot" to "warm" provided everyone else did the same--would you be very willing, somewhat willing, or not too willing?	1 VERY WILLING 2 SOMEWHAT WILLING 3 NOT TOO WILLING 4 NO CONTROL

Now let's think about other people--

7.	How likely do you think other people would be to drive at 50 miles per hour or less on major highways in order to save gasoline--do you think they would be very likely, somewhat likely, or not too likely?	1 VERY LIKELY 2 SOMEWHAT LIKELY 3 NOT TOO LIKELY 4 DON'T KNOW
8a.	How likely do you think other people would be to drive small economy cars, if most people in their neighborhoods also drove small economy cars--would you say very likely, somewhat likely, or not too likely?	1 VERY LIKELY 2 SOMEWHAT LIKELY 3 NOT TOO LIKELY 4 DON'T KNOW
8b.	How likely do you think other people would be to drive small economy cars in order to save gasoline, if most of the cars they drove with in traffic and on highways were also small--do you think they would be very likely, somewhat likely, or not too likely?	1 VERY LIKELY 2 SOMEWHAT LIKELY 3 NOT TOO LIKELY 4 DON'T KNOW
9.	How likely do you think other people would be to keep their thermostats set at 68 degrees during the day and 60 degrees at night this winter in order to save heating fuel--do you think they would be very likely, somewhat likely, or not too likely?	1 VERY LIKELY 2 SOMEWHAT LIKELY 3 NOT TOO LIKELY 4 DON'T KNOW

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10. How likely do you think other people would be to do their laundry or wash their dishes after 9:00 at night when the energy demand is not as great as it is earlier in the day--do you think they would be very likely, somewhat likely, or not too likely?

1 VERY LIKELY
2 SOMEWHAT LIKELY
3 NOT TOO LIKELY
4 DON'T KNOW

11. How likely do you think other people would be to help save energy by turning down the controls on their hot water heaters from "hot" to "warm"--would you say very likely, somewhat likely, or not too likely?

1 VERY LIKELY
2 SOMEWHAT LIKELY
3 NOT TOO LIKELY
4 DON'T KNOW

Now, will you tell us--

12. On the average, at what speed do you drive on major highways and thruways?

Under 55 MPH
55 MPH
Over 55 MPH
Don't Know

13. Is the car you usually drive a fullsize, midsize, or economy car? (INTERVIEWER: if "DON'T KNOW" probe for--
MAKE_____ MODEL_____)

1 FULLSIZE
2 MIDSIZE
3 ECONOMY
4 DON'T DRIVE
5 DON'T KNOW

14. At what temperature do you have your home heating thermostat set now?

Under 68 degrees
68 degrees
69 - 72 degrees
Over 72 degrees

15. When are the dishes and laundry usually done in your household--in the morning, the afternoon, the evening, or late at night? (INTERVIEWER: Circle one number for dishes and one number for laundry under the appropriate columns.)

	DISHES	LAUNDRY
1	MORNING	1
2	AFTERNOON	2
3	EVENING	3
4	LATE AT NIGHT	4
5	VARIES	5
6	DON'T KNOW	6

16. At what setting do you now have your hot water control?

1 HOT
2 WARM
3 OTHER (specify ____)
4 NO CONTROL
5 DON'T KNOW

17. Compared with other people you know, how much effort do you and your family make to save energy--would you say you make a great deal of effort, a fair amount of effort, a little effort, or no effort at all?

1 GREAT DEAL
2 FAIR AMOUNT
3 LITTLE
4 NONE
5 DON'T KNOW

18. How much impact do you think personal conservation efforts have on total consumption of energy--would you say a great deal, a fair amount, very little, or no impact?

1 GREAT DEAL
2 FAIR AMOUNT
3 VERY LITTLE
4 NONE
5 DON'T KNOW

19. How likely do you think it is that there will be a shortage of natural gas in your area this winter--would you say very likely, fairly likely, not very likely, or not at all likely?

1 VERY LIKELY
2 FAIRLY LIKELY
3 NOT VERY LIKELY
4 NOT AL ALL LIKELY
5 DON'T KNOW

20. Why do you say that? (The response to #19)

VERY LIKELY/FAIRLY LIKELY
__From what I have read or heard
__No real shortage/created/contrived to raise prices
__Because people have not been conserving
__Past experience/had one last year
__Low supply/unable to find new sources
__Gas is used a lot in this area
__Other answers
__Don't know

NOT VERY LIKELY/NOT AT ALL LIKELY
__Haven't heard anything about it
__No real shortage/contrived to raise prices
__Have enough in this area for winter
__Don't use much gas in this area
__Other answer
__Don't know

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HANDOUT 16

NATIONAL SURVEY RESULTS

1.	Job Security	1-6%	2-4%	3-12%	4-15%	5-62%
	Family Happiness	1-2%	2-1%	3- 3%	4- 5%	5-89%
	Saving Energy	1-2%	2-4%	3-17%	4-21%	5-56%
	Preventing Crime	1-1%	2-2%	3- 8%	4-13%	5-76%
	Fighting Inflation	1-1%	2-3%	3-14%	4-18%	5-63%
	U.S. National Security	1-6%	2-4%	3-14%	4-19%	5-56%
	Preventing Pollution	1-3%	2-5%	3-19%	4-16%	5-56%
	Helping Others	1-2%	2-4%	3-11%	4-18%	5-64%

2.	49 MPH or less	16%
	50-54 MPH	24%
	55 MPH	47%
	56-59 MPH	0%
	60 MPH or more	11%
3.	VERY WILLING	67%
	SOMEWHAT WILLING	15%
	NOT TOO WILLING	16%
	DON'T DRIVE	
	DON'T KNOW	2%
4.	67 degrees or less	29%
	68 degrees	30%
	69 degrees or above	37%
	Don't Know	4%
5.	VERY WILLING	50%
	SOMEWHAT WILLING	22%
	NOT TOO WILLING	18%
	CURRENTLY WASH AT LATE HOURS	7%
	DON'T KNOW	3%
6.	VERY WILLING	61%
	SOMEWHAT WILLING	25%
	NOT TOO WILLING	14%
	NO CONTROL	0%
7.	VERY LIKELY	16%
	SOMEWHAT LIKELY	28%
	NOT TOO LIKELY	54%
	DON'T KNOW	2%

8a.	VERY LIKELY	35%
	SOMEWHAT LIKELY	43%
	NOT TOO LIKELY	15%
	DON'T KNOW	7%
8b.	VERY LIKELY	35%
	SOMEWHAT LIKELY	46%
	NOT TOO LIKELY	13%
	DON'T KNOW	6%
9.	VERY LIKELY	28%
	SOMEWHAT LIKELY	40%
	NOT TOO LIKELY	29%
	DON'T KNOW	3%
10.	VERY LIKELY	18%
	SOMEWHAT LIKELY	35%
	NOT TOO LIKELY	39%
	DON'T KNOW	8%
11.	VERY LIKELY	30%
	SOMEWHAT LIKELY	42%
	NOT TOO LIKELY	25%
	DON'T KNOW	3%
12.	Under 55 MPH	26%
	55 MPH	46%
	Over 55 MPH	24%
	Don't Know	4%
13.	FULLSIZE	38%
	MIDSIZE	28%
	ECONOMY	30%
	DON'T DRIVE	
	DON'T KNOW	4%
14.	Under 68 degrees	20%
	68 degrees	18%
	69 to 72 degrees	22%
	Over 72 degrees	28%

		Dishes	Laundry
15.	MORNING	10%	40%
	AFTERNOON	7%	13%
	EVENING	37%	16%
	LATE AT NIGHT	19%	13%
	VARIES	27%	17%
	DON'T KNOW		1%

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PMI: The Treatment of Ideas

P = PLUS. The good things about an idea - why you like it

M = MINUS. The bad things about an idea - why you don't like it

I = INTEREST. What you find interesting about an idea

Instead of just saying that you like an idea, or don't like it, you can use a PMI. When you use a PMI you give the good points first, then the bad points, and then the points which are neither good nor bad, but are interesting. You can use a PMI as a way of treating ideas, suggestions and proposals. You can ask someone else to do a PMI on an idea or you may be asked to do one yourself.

PROCESS

Discussion:

When is a PMI most useful? Do you always look at the good and bad points of an idea?

Does a PMI waste time?

Is it easy to do a PMI?

PRINCIPLES

A. The PMI is important because without it you may reject a valuable idea that seems bad at first sight.

B. Without a PMI you are very unlikely to see the disadvantages of an idea that you like very much.

C. The PMI can show that ideas are not just good or bad but can also be interesting if they lead on to other ideas.

D. Without a PMI most judgements are based not on the value of the idea itself but on your emotions at that time.

E. With a PMI you decide whether or not you like the idea after you have explored it instead of before.

EXAMPLE

IDEA: All the seats should be taken out of buses

P: More people can get into each bus.

It would be easier to get in and out.

Buses would be cheaper to make and to repair.

M: Passengers would fall over if the bus stopped suddenly.

Old people and disabled people would not be able to use buses.

It would be difficult to carry shopping or babies.

I: Interesting idea that might lead to two types of bus, one with and one without seats.

Interesting idea that the same bus would do more work.

Interesting idea that comfort may not be so important in a bus.

PRACTICE

1. By law all cars should be painted bright yellow.

2. People should wear badges showing whether they are in a good mood or bad mood that day.

3. People should be allowed to work 10 hours a day for 4 days and have the rest of the week free, instead of working 8 hours a day for 5 days.

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4. Instead of getting married for ever, people should marry for a 5 year period, with an option to renew.

5. Since thinking is not yet taught in schools as a subject, people can join The School of Thinking and learn the operating skill of CoRT Thinking.

CAF: The Factors Involved

CAF = Consider All Factors

When you have to choose or make a decision or just think about something there are always many factors that you have to consider. If you leave out some of these factors your choice may seem right at the time but will later turn out to be wrong. When you are looking at other people's thinking you can try and see what factors they have left out.

Process

Discussion:

Is it easy to leave out important factors?

When is it most important to consider all the factors?

What is the difference between PMI and CAF?

What happens when other people leave out certain factors?

Do you need to consider all factors or only the most important ones?

Principles

A. Doing a CAF is useful before choosing, deciding or planning.

B. It is better to consider all the factors first and then pick out the ones that matter most.

C. You may have to ask someone else to tell you whether you have left out some important factors.

D. If you have left out an important factor your answer may seem right but will later turn out to be wrong.

E. If you do a CAF on someone else's thinking you may be able to tell the person what has been left out.

Example

Some years ago in London there was a law that all new buildings had to have large car parks in the basement so that the people working in the building would have somewhere to park. After a while this law was changed because it was found to be a bad mistake. Why?

They had forgotten to consider the factor that providing car parks would encourage everyone to drive in to work in their cars and so the traffic congestion on the roads was worse than ever.

Practice

1. A man goes to buy a secondhand car for his family. He considers all the following factors:

   That the person selling it actually owns it

   The price of the car

   The type of car and the colour

   The engine power and the speed of the car

   That all the mechanical parts are working perfectly

   That it is big enough for the family

   What factors has he left out?

2. Do a full CAF on the factors involved in choosing a career.

3. An inventor has invented a breakfast pill which is very tiny but contains all the food and vitamins you need. After you have eaten the pill you do not feel hungry for five hours. Should this pill be allowed? What are the factors involved?

4. What are the factors involved in choosing your hair style?

5. What factors should you consider in designing a chair?

6. A young couple are undecided whether to get married at once or wait. What factors should they be considering?

C & S: Consequences

C & S = Consequence and Sequel

The invention of the petrol engine made possible motorcars, aeroplanes, the oil industry and a great deal of pollution. If all the consequences could have been foreseen at the time, electric or steam engines might have been used for cars. A new invention, a plan, a rule or a decision all have consequences that go on for a long time. In thinking about an action the consequences should always be considered.

Immediate Consequences

Short term consequences (1-5 years)

Medium term consequences (5-25 years)

Long term consequences (over 25 years)

Process

Discussion:

Do long term consequences matter?

If it is not easy to see the consequences should you bother with them?

When is it most useful to look at the consequences?

Whose business is it to look at consequences?

Principles

A. Other people may be able to see the consequences of your action more easily than you can yourself.

B. It is important to know whether the consequences are reversible or not.

C. The immediate consequences and the long term consequences may be opposite: immediate consequences may be good and long term consequences bad or the other way round.

D. You should look at the consequences not only as they affect you but as they affect other people as well.

E. You should do a full C&S before deciding which consequences you ought to bother about.

Example

A man introduced rabbits to Australia to provide sport for his friends who had nothing to shoot at. The immediate consequences were good because his friends had plenty to shoot at. The short term consequences were also good because the rabbit provided an alternative source of meat. The medium term consequences were bad because the rabbit multiplied so much that it became a pest. The long term consequences were very bad because the rabbit was now such a pest all over Australia that it did a great deal of damage to crops.

Practice

1. A new electronic robot is invented to replace all human labour in factories. The invention is announced. Do a C&S on this.

2. A new law is suggested to allow school children to leave school and start earning a living as soon as they want to after the age of 12. Do a C&S on this from the point of view of someone who leaves early, from the point of view of the schools, from the point of view of society in general.

3. A new device makes it possible to tell whenever someone is telling a lie. Do an immediate C&S on this.

4. While a boy is away on holiday his best friend goes off with his girlfriend. What do you think would happen when the boy got back?

5. The world runs out of oil and petrol; what would happen?

6. All school examinations are abolished. Do a C&S on this.

AGO: Objectives

AGO = Aims, Goals, Objectives

You can do something out of habit, because everyone else is doing it or as a reaction to a situation. These are all 'because' reasons. But there are also times when you do something 'in order to' achieve some purpose or objective. It can help your thinking if you know exactly what you are trying to achieve. It can also help you to understand other people's thinking if you can see their objectives. In certain situations the words 'aims' and 'goals' are more appropriate than objectives but the meaning is the same.

Process

Discussion:

Is it necessary to always know your objectives exactly?

When is it most useful to know the objectives?

What happens if you do not have objectives?

How important are other people's objectives?

Principles

A. If you know exactly what your objectives are it is easier to achieve them.

B. In the same situation different people may have different objectives.

C. On the way to a final objective there may be a chain of smaller objectives each one following on from the previous one.

D. Objectives should be near enough, real enough and possible enough for a person to really try to reach them.

E. There may be many objectives but some are more important than others.

Example

A football club has the overall objective of winning the championship. But it could also have the objective of being promoted to the next division or avoiding being relegated to the division below. During a match the objective is to win and this involves the objectives of scoring goals and also preventing goals being scored against you. But there are other objectives as well: for instance to train and build up a powerful team for the future and also to entertain the public who pay to watch the games.

Practice

1. A father is very angry with his daughter so he doubles her pocket money. Why do you think he did this?

2. You are setting out to design a completely new type of house. What would your objectives be?

3. Everyone has to eat to live. But people have different objectives with regard to food. Do an AGO for the following people: housewife, cook, shopkeeper, food manufacturer, farmer, government.

4. Do an AGO for the police and put the objectives in order of priority.

5. You are the captain of a spacecraft approaching Earth from annother planet. What different objectives might you have? Do three alternative AGOs.

6. What is the difference between the AGO of a trade union leader and the AGO of the head of a large industry? Examine the points of difference and the points of similarity.

FIP: Priorities

FIP = First Important Priorities

Some things are more important than others. Some factors are more important than others. Some objectives are more important than others. Some consequences are more important than others. In thinking about a situation, after you have generated a number of ideas, you have to decide which ones are the more important so that you can do something about them. After doing a PMI, CAF, AGO, C&S you can do a FIP to pick out the most important points: the ones you have to give priority and deal with first.

Process

Discussion:

Are priorites natural or should you make a special effort to choose them?

Are the priorities always obvious?

When is it most useful to find the priorities?

How do you choose priorities?

Principles

A. It is important to get as many ideas as possible first and then to start picking out priorities.

B. Different people may have different priorities in the same situation.

C. You should know exactly why you have chosen something as a priority.

D. If it is difficult to choose the most important things then start at the other end by dropping out the least important and see what you are left with.

E. The ideas not chosen as priorities must not be ignored. They are considered as well - but after the priorities.

Example

Someone wants to borrow some money from you. From among the different factors you pick out the following as being priorities:

Do you have the money?

Can you afford to lend it?

Do you trust the borrower?

When will the borrower pay it back?

Practice

1. In doing a CAF on choosing a career you may come up with the following factors: the pay; the chances of improvement or promotion; the people you would be working with; the work environment; the distance you would have to travel to get to work; the interest or enjoyment of the work. If you had to pick out the three top priorities from among these factors which would you choose?

2. A father finds that his son has stolen a fishing rod from someone fishing in the canal. In dealing with the boy (aged 10) what should the father's priorities be?

3. Do an AGO on buying clothes and then do a FIP on the objectives you find.

4. In deciding whether you like someone or not which factors do you think are the most important? Give the top three priorities.

5. In running a school what do you think the priorities should be?

6. What makes a TV programme interesting? Do a CAF and then a FIP.

7. If you were in charge of giving out money for research how would you choose to place the money? What would your priorities be?

APC: Alternatives

APC = Alternatives, Possibilities, Choices

When you have to make a decision or take action you may at first think that you do not have all the choices. But if you look for them you may find that there are more alternatives than you thought. Similarly in looking at a situation there are always obvious explanations. But if you look for them you may find that there are other possible explanations that you had not thought of.

Process

Discussion:

What is the point of looking for more alternatives?

How do you tell which is the most likely or best alternative?

When do you stop looking for other possibilities?

When is it most useful to find new choices?

Principles

A. If you cannot think of any alternatives yourself you should ask someone else.

B. You go on looking for alternatives until you find one that you really like.

C. There is almost always an alternative even if this seems most unlikely.

D. You cannot know that the obvious explanation is best until you have looked at some others.

E. To look for alternatives when you are not satisfied is easy but to look for them when you are satisfied requires a deliberate effort.

Example

A car is found crashed in a ditch and the driver is dead. What could have happened?

APC: The driver had a heart attack or fainted.

The car had a puncture, blow-out or mechanical failure.

The driver was drunk.

The driver misjudged the curve of the road.

The driver was attacked by a wasp and lost concentration.

The driver fell asleep.

The driver was murdered first and then placed in the crashed car.

Practice

1. A man goes into a bar and asks for a drink of water. The girl behind the bar gives him a drink of water and then suddenly screams. What possible explanations are there?

2. You discover that your best friend is a thief. What alternatives do you have?

3. The brightest woman in the class starts making mistakes in her work on purpose. What possible explanations are there?

4. Less people want to be scientists. What possible explanations are there for this and what possible action can be taken?

5. A factory owner knows that if he pays the wages his workers demand and probably deserve he will lose money and will have to close the factory and then there will be unemployment in that area. What choices does he have?

6. A girl wants to get married but she has to stay at home to look after her old father. What alternatives are there?

7. In dealing with pollution what alternative courses of action are there?

[redacted] Viewpoint

OPV = Other Point of View

Many thinking situations involve other people. What these other people think is just as much part of the situation as the factors, the consequences, the objectives etc. These other people may have a very different viewpoint. Although they are in the same situation they may look at things very differently. It is a very important part of thinking to be able to tell how other people are thinking and trying to see things from another person's viewpoint is what doing an OPV is about. Another person may consider different factors (CAF), see different consequences (C&S), have different objectives (AGO) or priorities (FIP). In fact all the thinking that you do for yourself someone else may be doing for himself - but differently.

[redacted]

Discussion:

Whose point of view is right if two points of view differ?

If someone else cannot see your viewpoint should you bother about his?

Why is it necessary to see someone else's viewpoint?

Should your action be based on your viewpoint or on someone else's as well?

[redacted]

A. You ought to be able to see the other point of view whether you agree with it or not.

B. Every point of view may be right for the person holding it but not right enough to be imposed on others.

C. Different people have different positions, backgrounds, knowledge, interests, values, wants etc. so it is not surprising that in the same situation viewpoints may differ greatly.

D. Try and see whether the other person can see your viewpoint.

E. Be able to spell out the differences and similarities between viewpoints.

EXAMPLE

A salesman is trying to sell a secondhand sports car. His point of view is to show how smart it is, how powerful the engine, the new tires, how it suits you, what a good buy it is. Your point of view is to see whether it has been in a crash, how much spares cost, how worn are the parts, how much gas it uses, how it compares to other cars you have seen.

PRACTICE

1. A father forbids his daughter of 13 to smoke. What is his point of view and what is hers?

2. An inventor discovers an entirely new way of making cloth. This invention means that for every 20 people employed in making cloth only one would be needed. Do an OPV for the inventor, the factory owner, the workers, the general public buying cloth.

3. The person next door sells his house at a high price to an Asian family from Uganda. Some people in the street object very strongly and others do not mind. What are the points of view of the person selling the house, the Asian family, those who object and those who do not mind?

4. There is a train strike and people find it difficult to get to work. How many different points of view are involved in this situation?

5. A boy refuses to obey his teacher in class. The teacher reports the boy to the head who suspends him. The boy's parents object. What are the viewpoints of the boy, the teacher, the head, the parents, his classmates?

6. A lawyer is defending in court a man whom he believes to be guilty of stealing some money. What are the viewpoints of the lawyer, the judge, the accused man and the jury?

7. There is a plan to pull down some old houses and build modern blocks of apartments with wider roads in between them. What are the viewpoints of the planners, the architects, the people who live in the houses, the children who live in the houses?

8. Everyone is always talking about pollution but cleaning up the environment costs money. What are the viewpoints of the following people: the ordinary man in the street, an organization concerned with pollution, the industrialists, the government?

Decisions

Some decisions are easy and some are difficult. There are decisions to be made all the time: which clothes to wear; which record to buy; whether to go out or not; how to amuse yourself; which career to choose; whether to stay on in a job or not; whether to go abroad; whether to spend money on something or to save it. Sometimes you have to decide whether to do something or not to do it. Sometimes the decision is a choice between alternatives. Sometimes the decision is forced on you like when you come to a fork in the road and have to decide which road to take. In making decisions it is useful to be clear about the factors involved (CAF), the objectives (AGO), the priorities (FIP), the consequences (C&S), and of course the alternatives (APC).

Process

Discussion:

Why are some decisions easier than others?

What are the most important things to think about in making a decision?

How can you tell that a decision you have made is the right one?

Is it better to think about decisions or just make them and see what happens?

Principles

A. You should always be able to tell yourself the real reason behind any decision you make.

B. It is important to know whether a decision can be reversed or not after it has been made.

C. Not making a decision is really a decision to do nothing.

D. Decisions are very difficult to make if you are not prepared to give up something in order to gain something else.

E. In making a decision you should consider all the factors (CAF), look at the consequences (C&S), be very clear about objectives (AGO), assess the priorities (FIP), and find all the possible alternatives (APC). When you have done this a decision may be much easier.

Practice

1. A policeman notices a strange light in a warehouse at night. He is on his own and he has to make a quick decision as to what he is going to do.

2. A young man living at home with his widowed mother cannot find work in his own town but gets offered a job in another town quite far away. His mother says that she is too old to move and make new friends. He has to decide whether to take the job and leave his mother or refuse the job and stay at home.

3. A girl has two boyfriends: one of them is quiet and hardworking, the other is better looking and more fun but rather unreliable. Both want to marry her. She has to decide.

4. Parents with a crippled child have to decide whether to send her to a special school or to an ordinary school.

5. A politician has his own strong views about capital punishment which he does not want re-introduced. But he knows that the majority of his constituents are in favour of the re-introduction for crimes of a certain type such as killing a policeman. How should he decide to vote?

6. The head of a big business is kidnapped and the kidnappers demand a large amount of money for his release. The police know that if the money is given then other people will be kidnapped for money. If the money is not given the man will be killed. How should the decision be made?

7. How do people decide to spend their money?

EVALUATION QUESTIONNAIRE

The International Understanding Project and the Edward de Bono School of Thinking are interested in receiving your comments regarding these materials. Please fill out this questionnaire and return it to the address below.

1. Which of the activities in "The Mountain West and the World: International Connections and Alternative Futures" did you find most useful and why?

2. Which of the activities did you find least useful and why?

3. What suggestions do you have for improving this handbook?

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